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RECORDED

A.D. 1848 N° 12,166.

Preserving Milk and Cream.

LOUIS' SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FELIX HYACINTHE FOLLIET LOUIS, of Southwark, Gentleman, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her Royal Letters Patent under the Great Seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the Twenty-sixth day of May, One thousand eight hundred and forty-eight, in the eleventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Felix Hyacinthe Folliet Louis, my exors, admors, and assigns, Her especial license, full power, sole privilege and authority, that I, the said Felix Hyacinthe Folliet Louis, my exors, admors, and assigns, or such others as I, the said Felix Hyacinthe Folliet Louis, my exors, admors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, within England, Wales, and the Town of Berwick-upon-Tweed, in the Islands of Guernsey, Jersey, Alderney, Sark, and Man, and also in all Her said Majesty's Colonies and Plantations abroad, my Invention of "AN IMPROVED METHOD OR PROCESS OF PRESERVING CERTAIN ANIMAL PRODUCTS;" in which said Letters Patent is contained a proviso that I, the said Felix Hyacinthe Folliet Louis, should cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, by an instrument in writing under my hand and seal, to be inrolled in Her Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Felix Hyacinthe Folliet Louis, hereby declare that the nature of my said In-

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vention, and in what manner the same is to be performed, are fully described and ascertained in and by the present Specification thereof, reference being had to the Drawings hereunto annexed, that is to say:—

The animal products to which my said Invention relates are cows' milk, goats' milk, and asses' milk, and the nature of my said Invention consists in 5 converting the same into solid cakes or masses, soluble in warm water, and capable of preserving for a long time their original freshness and sweetness. And the method or process by which I accomplish such conversion is as follows:—

I first mix with the milk in its natural state a quantity of well clarified raw 10 sugar in the proportion of about four ounces of sugar for each gallon of milk, and then agitate and evaporate it in an apparatus of the description represented in the annexed Drawings. Figure 1 of these Drawings is an external elevation, and Figure 2 a sectional elevation, of this apparatus. Figure 3 is a top 15 plan of it, and Figure 4 a plan on the line *x, z*. *A, A, A*, are three hollow standards, which support and communicate internally with a number of horizontal circular boxes *c, c*, as shewn in the sectional elevation, Figure 2; *e* is a pipe through which steam is supplied from any convenient source to the hollow standards *A, A, A*, and boxes *c, c*; *m* is the steam induction cock; *h*, steam escape valve; *k*, tap for drawing off occasionally the water of conden- 20 sation; *a, a*, are open evaporating pans for holding the milk, which rest upon the top of the steam boxes *c, c*; *d* is a vertical shaft which passes up through fluid-tight collars in the centres of the boxes *c, c*, and pans *a, a*, and turns at top and bottom in the sockets *l¹, l²*; *o, o*, are radial arms of a rake form, which are attached to the shaft *d*, and when revolving along with it traverse 25 and agitate the milk in the pans *a, a*; *f* is a bevil wheel, which is affixed to the top of the shaft *d*, and gears into another bevil wheel *g*, which is turned by the crank handle *H*.

The mode of operating with the apparatus is as follows:—The pans *a, a*, are filled to near the top with milk, sweetened as before directed; 30 steam is then admitted (by turning the cock *m*) to the hollow standards *A, A, A*, and boxes *c, c*, and kept there at a temperature of from eighty degrees to ninety degrees centigrade (one hundred and seventy-six degrees to one hundred and ninety-four degrees Fahrenheit), and while the milk is evaporating under the influence of the steam heat, it is kept constantly 35 stirred by turning slowly round the vertical shaft *d*, and with it the rake-like radial arms *o, o*. As the operation proceeds the milk becomes gradually thicker and thicker till it becomes at last like a paste, which, as it approximates closely to hardness, is taken out of the pans and pressed in moulds into cakes of any suitable form. Or, where great dispatch is not required, instead of 40

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using the apparatus before described, I fill a number of very shallow pans with milk, sweetened as aforesaid, to the height of not more than about the tenth of an inch, and leave it there exposed to the ordinary temperature of the atmosphere till it evaporates to dryness, after which the solid residuum is
5 collected and pressed into moulds as before. If the atmosphere is not in a good hygrometric state for the operation, the pans may be placed in a drying chamber kept at a temperature not exceeding fifty degrees centigrade (one hundred and twenty-two degrees Fahrenheit). Or, if milk cakes of a very rich quality are desired to be produced, I proceed as follows:—I sweeten the milk
10 as aforesaid, and warm it to nearly the boiling point, and then leave it to cool slowly; when it comes to a tepid state I curdle it by means of rennet, or any weak acid; I next throw the whole into a sieve in order to separate the curd from the whey. The curd I wash well with cold water, and then subject it to strong pressure in order to free it from any water which it may imbibe in the
15 course of the process, and the whey I evaporate to dryness in order to recover the salts with which it is charged. The curd is next placed in a pan over a slow fire and stirred continually, and the salts recovered from the whey are thrown in by little and little, accompanied with a small portion of bicarbonate of soda or some alkali, say, one part of the alkali for every twenty parts of the
20 whey salts. After a time the contents of the pan begin to melt and amalgamate, and while in this state a small portion of gum dragon, in a finely powdered state, may be added in order to facilitate the solidification of the mass. The cream of milk I solidify as well as the milk itself, and either by the method or process first herein-before described, or by any of the preceding
25 modifications of it.

And having now described the nature of my said Invention, and the manner in which the same is to be performed, I declare that what I claim as my Invention is, the conversion of milk and cream into solid cakes or masses by the method or process, and the modifications of the said method or process,
30 herein-before described.

In witness whereof, I, the said Felix Hyacinthe Folliet Louis, have hereunto set my hand and seal, this Twentieth day of November, One thousand eight hundred and forty-eight.

F. H. FOLLIET (L.S.) LOUIS.

35 Enrolled the Twenty-fifth day of November, in the year of our Lord One thousand eight hundred and forty-eight.

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